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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,587	07/15/2003	Chuji Ishikawa	240443US3	6880

22850 7590 08/09/2005

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EXAMINER	
VERBITSKY, GAIL KAPLAN	

ART UNIT	PAPER NUMBER
2859	

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/618,587	ISHIKAWA ET AL.	
	Examiner	Art Unit	
	Gail Verbitsky	2859	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) *2,6,8 and 19* is/are withdrawn from consideration.

5)☒ Claim(s) *1,3-5,7,9-15,18 and 20-22* is/are allowed.

6)☒ Claim(s) *16 and 17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 01032131A [hereinafter JP] in view of Iacovangelo (U.S. 6261694) and Berthold et al. (U.S. 6490040) [hereinafter Berthold].

JP discloses in Fig. 1 a device in the field of applicant's endeavor, the device comprises an infrared sensor cooled by an air blast (air curtain) 20 from an inherent airflow unit. As shown in Fig. 1, the air blast (arrow) is parallel to a window member 12. This would imply, that at least some air would be provided along the window surface, and thus, between the sensor and an object emitting IR 14.

JP does not explicitly teach to include a fluorination organic compound, as stated in claim 16.

Iacovangelo discloses a device wherein, a window substrate comprising a fluorine containing resins. This would imply, that all surfaces of the window comprise fluorine-containing resins.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to add a fluorine containing resin coating, as taught by Iacovangelo, on a surface of the window member of device disclosed by JP, so as to protect the window member

from ambient moisture contamination, and thus, improve accuracy of the device by protecting the member from harsh environment, because this particular compound is known to be a good water-repellent.

JP does not explicitly teach the particular unidirectional air curtain, as stated in claim 16.

Berthold discloses in Fig. 1 a device/ sensor in the field of applicant's endeavor comprising a unidirectional tangential air curtain/ air blast/ air blow 24 along a window.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify the airflow unit in the device disclosed by JP, so as to provide a unidirectional parallel/ air curtain along the window, as taught by Berthold, in order to prevent the window overheating and contamination, so as to provide more accurate results of measurements.

3. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP in view Wallace et al. (U.S. 6624944) [hereinafter Wallace] in view of Berthold.

JP discloses all the limitations claimed by applicant with the exception of a fluorination organic compound.

Wallace discloses a device comprising a window 11 and a coating (membrane) 12 transmissive to an IR and comprising a fluorination material being a fluorocarbon polymer (col. 6, lines 56-57) on at least the outer surface of the window member (col. 2, line 65) or on both surfaces (col. 2, line 4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to add a fluorocarbon polymer coating, as taught by Wallace, on a surfaces of the window member of device disclosed by JP, so as to protect the window member from

ambient moisture contamination, and thus, improve accuracy of the device by protecting the member from harsh environment, because this particular compound is known to be a good water-repellent.

JP does not explicitly teach the particular unidirectional air curtain, as stated in claim 16.

Berthold discloses in Fig. 1 a device/ sensor in the field of applicant's endeavor comprising a unidirectional tangential air curtain/ air blast/ air blow 24 along a window.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify the airflow unit in the device disclosed by JP, so as to provide a unidirectional parallel/ air curtain along the window, as taught by Berthold, in order to prevent the window overheating and contamination, so as to provide more accurate results of measurements.

4. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP and Wallace, and Berthold as applied to claim 16 above, and further in view of Nakata et al. (U.S. 4286134) [hereinafter Nakata].

JP, Wallace and Berthold disclose the device as stated above in paragraph 4.

They do not teach the particular airflow unit, as claimed by applicant in claim 17.

Nakata discloses a device in the field of applicant's endeavor. The device comprises an air flow unit comprising an air blower (ventilator) 55 which sends air between an IR sensor 49 and an object 38, as shown with at least an arrow 50 in Fig. 5, the air is substantially parallel (along) a surface of a window (protection cover) 44. The airflow unit further comprises a plurality of small bores (suction member) 58 to suck the air flowing between the object and the sensor outside an oven (col. 6, lines 48-53).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the airflow unit, in the device, disclosed by JP, Wallace and Berthold, so as to add a ventilator and a suction member, as taught by Nakata, in order to prevent sensor overheating, and thus, avoiding to damaging the sensor, and provide more accurate results of temperature measurements, and also to remove heated air from the device and thus, to accelerate cooling.

5. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP, Iacovangelo and Berthold, as applied to claim 16 above, and further in view of Nakata et al. (U.S. 4286134) [hereinafter Nakata].

JP, Iacovangelo and Berthold disclose the device as stated above in paragraph 3.

They do not teach the particular airflow unit, as claimed by applicant in claim 17.

Nakata discloses a device in the field of applicant's endeavor. The device comprises an air flow unit comprising an air blower (ventilator) 55 which sends air between an IR sensor 49 and an object 38, as shown with at least an arrow 50 in Fig. 5, the air is substantially parallel (along) a surface of a window (protection cover) 44. The airflow unit further comprises a plurality of small bores (suction member) 58 to suck the air flowing between the object and the sensor outside an oven (col. 6, lines 48-53).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the airflow unit, in the device, disclosed by JP and Iacovangelo, so as to add a ventilator and a suction member, as taught by Nakata, in order to prevent sensor overheating, and thus, avoiding to damaging the sensor, and provide more accurate results of

temperature measurements, and also to remove heated air from the device and thus, to accelerate cooling.

Allowable Subject Matter

6. Claims 1, 3-5, 7, 9-15, 18, 20-22 are allowed.

Response to Arguments

7. Applicant's arguments with respect to claims 16-17 have been considered but are moot in view of the new ground(s) of rejection necessitated by the present amendment.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in the PTO-892 and not mentioned above disclose related devices and methods.

JP 10318542A discloses in Figs. 1 and 19 a device in the field of applicant's endeavor comprising an infrared sensor 1 having a housing with a window 5. The device further has an airflow unit comprising a fan 35 as shown between the sensor housing / window and an object (food). This would imply, that the airflow is provided between the window (along the surface of the window) and the object. The direction of the airflow will, among other, include a parallel/ tangential direction, thus, inherently; the airflow can be qualified as an air curtain.

Any inquiry concerning this communication should be directed to the Examiner Verbitsky who can be reached at (571) 272-2253 Monday through Friday 8:00 to 4:00 ET.

GKV

Gail Verbitsky
Primary Patent Examiner, TC 2800

August 02, 2005